

REMARKS

Claims 1-15 remain in the application.

The Rejections:

In the Final Office Action dated October 9, 2007, the Examiner rejected Claims 1-7 and 9-15 under 35 U.S.C. 102(b) as being clearly anticipated by Gagnon et al. U.S. Patent No. 5,086,881.

Referring to Claims 1, 2 and 12, the Examiner stated that Gagnon discloses an elevator driven by a flat linear motor as claim (see all figures and respective portions of the specification). Gagnon further discloses in figures 1-3, a drive having a linear motor (12) that includes a secondary part (28) positioned between a first primary part (30) and second primary part (32), wherein the primary parts are movable relative to one another (see figures 2 and 3), and where a compensating means (68) carries the primary parts and acts by a compensating normal force against an attractive normal force between each of the primary parts (30, 32) and the secondary part (28) (see Col. 2, lines 50-53; Col. 3, lines 40-51 and figures 1-6).

As to Claims 3, 4 and 7, the Examiner stated that Gagnon discloses a primary assembly together with the primary parts in which at least one guide element (70, 72) having an attached setting means to guides the drive along the secondary part and in addition move the guide elements closer or farther to the secondary element. Furthermore, Gagnon discloses that brake elements are inherently included in the linear motor (see Col. 2, lines 45-47 and Col. 5, lines 41-47). Moreover, the setting elements do not move the compensation means (68) towards or away from the secondary part.

Referring to Claim 5, the Examiner stated that Gagnon discloses that each guide roller is utilized to maintain an air gap between each primary element (30, 32) and the secondary element (28) (see Col. 3, lines 37-39, lines. 44-47).

As to Claim 6, the Examiner stated that it is well-known in the art of linear motors used in elevator systems that the width of the air gaps is at a maximum and that the attractive normal force is small when the guide elements guides the drive (primary parts) into contact with the secondary part and vice versa if the brake elements keep the drive (primary parts) in contact with the secondary part.

16690

Referring to Claim 9, the Examiner stated that it is well known in the art to stack more than one linear motor in series in an elevator shaft.

As to Claims 10 and 11, the Examiner stated that the method steps are inherent in the product structure of claims 1 and 6 above. Further discussion is omitted.

Referring to Claim 13, the Examiner stated that Gagnon discloses in figure 1, an elevator car (14) and a drive that drives a counterweight (34) directly.

As to Claim 14, the Examiner stated that Gagnon depicts from figure 1, an elevator car (14) and the counterweight (34) are connected by way of at least one rope (16), wherein the drive moves the elevator and the counterweight with a 2:1 slinging.

Referring to Claim 15, the Examiner stated that Gagnon depicts from figure 1, a secondary part (28) extending over the entire length of a shaft.

The Response:

The Examiner stated that the annotations in the annotated sheets of drawings that were received on 6/08/2007 are acceptable. Applicants are submitting herewith a clean version of two Replacement Sheets containing the corrected annotations for Figs. 1 and 2.

The Examiner rejected Claims 1-7 and 9-15 under 35 U.S.C. 102(b) as being clearly anticipated by Gagnon. In regards to Applicants' arguments that Gagnon does not teach or describe having a linear motor wherein the primary parts are movable relative to one another, the Examiner stated that even though Gagnon may describe that the primary parts are welded to the mainstays, this does not preclude the primary parts to move relative to one another as within the secondary supports (20) with the assistance of guide rollers (70, 72) as shown in figures 2 and 3.

Gagnon does not anticipate the present invention. The primaries 30, 32 of Gagnon clearly cannot move relative to each other (as recited in Applicants' independent claims). In fact, Gagnon **unquestionably teaches away** from this essential feature of the present invention.

In Gagnon, the primary elements 30, 32 of the linear motor 12 are welded to the mainstays 68 on opposing sides of the secondary element 28. In turn, the mainstays 68 are fixed within the structural housing 26. In Col. 3, Lines 29-61, Gagnon teaches that:

Each of the first and second upper cross-pieces 56, 60 and the first and second lower cross-pieces 58, 62, has a first guide roller 70 and a second guide roller 72 attached thereto. The first guide rollers 70 are attached to the cross-pieces adjacent the first counterweight assembly 36 and engage bus bar 74. The second guide rollers 72 are attached to the cross-pieces adjacent the second counterweight assembly and engage the secondary support 20 as will be discussed infra. Each guide roller is utilized to maintain an air gap between each primary element 30-32 and the secondary element 28.

Each primary element, which are discussed infra, are affixed to the mainstays 68 by welding. Each mainstay strengthens and stiffens each primary element against deflection due to magnetic and other dynamic loads. Deflection of the primary elements must be minimized to maintain air gaps between each primary element and the secondary element thereby minimizing the potential for interference therebetween. Each mainstay also transmits the loads and forces within the motor assembly to the housing 26. As a result, the housing (and the car 14 via ropes 16) may be driven upwardly and downwardly by operation of the motor.

The Primary Elements

Each primary element of the motor is composed of a magnetic flux-carrying core material, such as steel in laminated form (shown as solid for ease of depiction in FIGS. 1-3), as is known in the art. The laminations are arranged vertically along the direction of travel of the linear motor. The laminations are compressed together by means of brackets 76 (see FIG. 6) and then welded to the mainstay 68 through the openings 77 not shown.

The Examiner stated that the primary parts are not precluded to move relative to one another as within the secondary supports 20 with the assistance of guide rollers 70, 72 as shown in Figs. 2 and 3. Applicants do not understand how the primary parts 30, 32 can move "within" the secondary support 20. The primary parts 30, 32 clearly are spaced from the secondary support 20 and are centered at the secondary element 28. The secondary support 20 is comprised of an I-beam 94 to which are attached plates 96, 98. (Col. 4, Lines 65-68) The plates 96, 98 support the secondary element 28 and provide a surface for the rollers 72 which help maintain the air gap between the primary elements and the secondary element. (Col. 5, Lines 22-27) If the air gap between the primary elements 30, 32 and the secondary element 28 is maintained, obviously the primary elements don't move relative to one another "within" the secondary support 20.

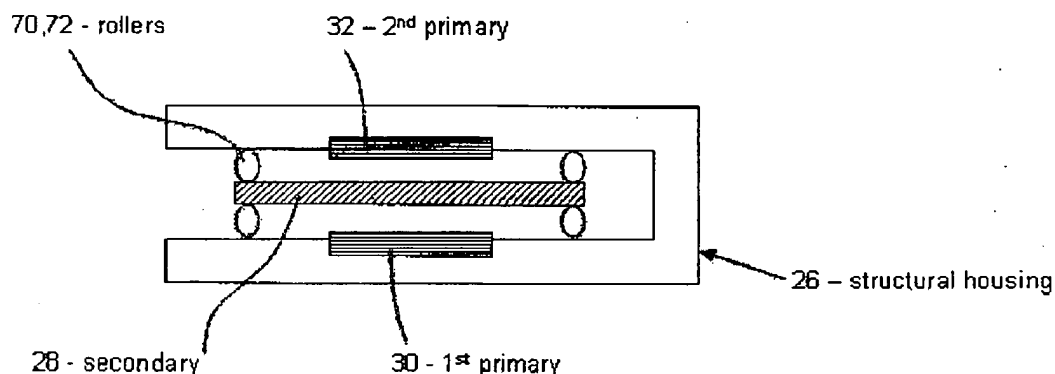
The mainstays 68 strengthen and stiffen each primary element to minimize deflection and that structural rigidity is particularly important in **maintaining the required air gap** between the secondary element and the primary elements. Accordingly, the primary elements 30, 32 are rigidly incorporated into the housing 26 and are at a fixed distance from each other as well as from the secondary element 28. Accordingly, all attractive force between the secondary and primary parts is completely absorbed into the fixed structural housing 26 which spans across both sides of the secondary element 28.

Gagnon teaches that the housing 26 is constructed of structural steel and includes a primary assembly 38 (Col. 2, Lines 56-59) which in turn comprises a pair of mainstays 68 (Col. 3, lines 11-24). Furthermore, each primary element 30, 32 is affixed to the mainstays 68 by welding. (Col. 3, Lines 40-41) Each mainstay **strengthens and stiffens each primary element against deflection due to magnetic and other dynamic loads.** (Col. 3, Lines 41-43) Deflection of the primary elements **must be minimized to maintain air gaps between each primary element and the secondary element** thereby minimizing the potential for interference therebetween. (Col. 3, Lines 44-47) Each mainstay 68 also transmits the loads and forces within the motor assembly to the housing 26. (Col. 3, Lines 47-49).

Moreover, it is impossible to perceive how the primaries 30, 32 could deflect due to magnetic or other dynamic loads since they are actually composed of a plurality of vertically aligned steel laminations which compressed together by brackets 76 and are welded to the mainstays 68. (Fig. 6 and Col. 3, Lines 54-61) Thus, Gagnon shows the following:

- The primaries 30, 32 are structurally rigid since they are composed of a plurality of steel laminations.
- Each mainstay 68 is a structurally rigid component of the housing 26.
- It is well established that welds do not deflect; they either hold or fracture completely.

Accordingly, the housing 26, the mainstays 68 and the primaries 30, 32 of Gagnon form a **unitary rigid structure** as shown schematically below.



It is apparent therefore that the primaries 30, 32 of Gagnon are **fixed relative to each other** and **not movable relative to one another** as required by Applicants' independent Claims 1, 10 and 12. Rollers 70, 72 center the structural housing 26 symmetrically about the secondary 28. If the secondary 28 deflects along the travel path of the elevator, the rollers 70, 72 merely guide the structural housing 26 along the same deflection. The rollers 70, 72 maintain a specific gap between each of the primaries 30, 32 and the secondary 28, whereas the distance between the primaries is fixed by their rigid incorporation into the structural housing 26 as discussed in detail above.

In view of the above arguments, Applicants believe that the claims of record define patentable subject matter over the art of record. Accordingly, an early Notice of Allowance is respectfully requested.